GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Municipal Administration and Urban Development Department - The AndhraPradesh Building Rules, 2017 –Amendments – Orders – Issued.

MUNICIPAL ADMINISTRATION AND URBAN DEVELOPMENT (M) DEPARTMENT

G.O.Ms.No.145 **Dated.23.11.2023.**

Read the following:-

1) G.O.Ms.No.119, MA&UD (H) Department, dated.28.03.2017.
2) G.O.Ms.No.401, MA&UD (M) Department, dated.15.11.2017.
3) G.O.Ms.No.223, MA&UD (M) Department, dated.09.07.2018.
4) G.O.Ms.No.180, MA&UD (M) Department, dated.01.10.2020.
5) G.O.Ms.No.175, MA&UD (M) Department, dated.10.11.2022.
6) AMRUT 2.0 Reforms toolkit issued by MoHUA, GoI.
7) From the DT&CP., A.P., Mangalagiri, Lr.RoC.No.MAU03-17/41/2022-PLG-DOTCP (E-1675542), dated.16.08.2023.

****

O R D E R:

In the G.O.1st read above, the Government have issued the Andhra Pradesh Building Rules, 2017 applicable to the building activities in the state, based on the Model Building Bye-Laws, 2016 of Government of India and subsequently amendments were issued in the references 2nd to 4th read above.

2. In order to make the building environment safe, inclusive, environmentally sustainable and contribute towards economic development and enhance Ease of Doing Business (EoDB) and to have investment friendly in the state and to provide In-Building Solutions for Digital Telecommunication Infrastructure, Government vide G.O. 5th read above, issued certain amendments tothe Andhra Pradesh Building Rules, 2017.

3. In the reference 6th read above, Government of India have issued "AMRUT 2.0 REFORMS toolkit under Phase 1 and suggested certain reforms in which one of the reform pertains to - Leveraging technological advancements through building bye laws which enhances ease of living of citizens.

4. In the reference 7th read above, the Director of Town & Country Planning, A.P., Mangalagiri while informing about the AMRUT 2.0 REFORMS, proposed certain amendments to the Andhra Pradesh Building Rules, 2017.

5. After careful examination of the matter, the Government have decided to implement the urban reforms proposed by the GoI vide "AMRUT 2.0 REFORMS toolkit which enhances ease of living of citizens by amending the Andhra Pradesh Building Rules, 2017 issued vide G.O 1st read above.

6. Accordingly, the appended notification will be published in an Extra-ordinary issue of Andhra Pradesh Gazette, dated:23.11.2023.

(P.T.O)

7. These amendments shall come into force with immediate effect.

[BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH]

Y.SRILAKSHMI
SPECIAL CHIEF SECRETARY TO GOVERNMENT

To
The Commissioner of Printing, Stationery & Stores Purchase Department,
Vijayawada (for Publication of the Notification in the Gazette).
The Commissioner & Director of Municipal Administration,
A.P., Vaddeswaram, Guntur.
The Metropolitan Commissioner, Visakhapatnam Metropolitan Region
Development Authority, Visakhapatnam.
The Director of Town and Country Planning, A.P.,
Mangalagiri, Guntur district.
The Commissioner, A.P. Capital RegionDevelopment Authority, Vijayawada.
The Director General, Andhra Pradesh State Disaster Response
& Fire Services Department, A.P., Vijayawada.
All the Municipal Commissioners in the State
– **through** the C&DMA., A.P., Vaddeswaram, Guntur.
All Vice Chairpersons of Development Authorities in the State
- **through**the DT&CP, A.P., Mangalagiri, Guntur District.
The Chairman & Managing Director, APTRANSCO., Vijayawada.
The Commissioner & Inspector General of Registration & Stamps,
A.P.,Vijayawada.
All the District Collectors in the State.

Copy to:

The Panchayat Raj Department, A.P. Secretariat.
The Revenue (R&S) Department, A.P. Secretariat.
The Energy Department, A.P. Secretariat.
The ITE&C Department, A.P. Secretariat.
The Home Department, A.P. Secretariat.
The Law Department, A.P. Secretariat.
The OSD/PS to Additional/ Secretary to Hon'ble Chief Minister.
The OSD to Hon'ble Minister for MA&UD Department.
The P.S. to Special Chief Secretary to Government, MA&UD Department.
SF/SC.

// FORWARDED BY ORDER //

SECTION OFFICER.

APPENDIX
NOTIFICATION

In exercise of the powers conferred by section 585 read with section 592 of the AndhraPradesh Municipal Corporation Act, 1955 (adapted GHMC Act, 1955); section 18 of the Andhra Pradesh Municipal Corporations Act, 1994;

(Contd..3)

Section 326 read with Section 185 of the Andhra Pradesh Municipalities Act, 1965, Section 44 (1) of the Andhra Pradesh Town Planning Act, 1920, section 2 of A.P. Capital Region Development Authority Act, 2015 and Section 117 of the Andhra Pradesh Metropolitan Region and Urban Development Authorities Act, 2016, the Government hereby make the following amendments to the Andhra Pradesh Building Rules, 2017 issued in G.O.Ms.No.119, MA&UD (H) Department, dated.28.03.2017.

AMENDMENTS

In the said Rules:

I. In Rule (6), in sub-rule (30), after clause(k), the following shall be added, namely,-

"(l) Electric Vehicle Charging Infrastructure (EVCI):

(i) Based on the occupancy pattern and the total parking provisions in the premises of the various building types, charging infrastructures shall be provided only for EVS, which is currently assumed to be 20% of all 'vehicle holding capacity'/'parking capacity' at the premise.

(ii) Additionally, the building premise will have to have an additional power load, equivalent to the power required for all charging points (in a Public Charging Station - PCS) to be operated simultaneously, with a safety factor of 1.25. The Charging requirement for residential and all other buildings are detailed out in Annexure - 8."

II. In rule 20, in sub rule (2), the existing sub-heading and paragraph shall be numbered as clause (a) and after that clause so numbered, the followingclause shall be added,namely,-

"(b) Dual Piping: A dual piping system is a type of plumbing system where two separate sets of pipes are installed to distribute water in a building. One set of pipes carries potable or drinking water, while the other set of pipes carries non-potable or reclaimed water. The potable water pipes are connected to the main water supply and distribute water for drinking, cooking, and bathing. The non-potable or reclaimed water pipes carry water that has been treated and recycled from sources like rainwater, grey water from sinks and showers, or treated wastewater".

III. In Rule 53, for sub rule (5), the following shall be substituted, namely,-

" (5) The sites in Old/Existing Built-up Areas/Congested Areas/Settlement/Gram Khantam/Abadi and List of Areas Prohibited for

(P.T.O.)

High-Rise Buildings shall be notified by the Competent Authority. Till such time, the Locality/Area of the Districts in Andhra Pradesh mentioned in Annexure-I and Annexure-II of G.O.Ms.No.168, MA&UD, dt.07.04.2012 shall prevail. The Government may add to or delete from the list of the said areas.

IV. After annexure 7, the following shall be added, namely, -

Annexure 8
Explanatory Note on
Electric Vehicle Charging Infrastructure

Abbreviations:

UNFCC	-	United Nation Framework Convention on Climate Change
IPCC	-	Inter-Governmental Panel on Climate Change
GHG	-	Green House Gases
2Ws	-	Two wheelers
3Ws	-	Three wheelers
4Ws	-	Four wheelers / PV(cars)
PVs	-	Passenger Vehicles
CVs	-	Commercial Vehicles
EV	-	Electric Vehicle
EVSE	-	Electric Vehicle Supply Equipment
SC	-	Slow Charger / Slow Charging (AC)
FC	-	Fast Charger / Fast Charging (DC and a few AC ones)
BS	-	Battery Swap
PCS	-	Public Charging Stations
PCI	-	Public Charging Infrastructure
Private CI	-	Private Charging Infrastructure
MBBL	-	Model Building Bye-Laws, 2016
URDPFI	-	Urban and Regional Development Plan Formulation and Implementation Guidelines, 2014
NSP	-	Network Service Provider (information network)
SP	-	Service Provider

1. Rationale for EVCI establishment

Rapid urbanization coupled with adoption of mechanized transportation modes has resulted in high emissions of Green House Gases that goes on to impact Global warming. Unless, the global surface temperature rise is restricted to no more than2°C compared with pre-industrial levels, the IPCC has warned that the world will see irreversible catastrophic climate change.

India being a signatory to the UNFCCC, has pledged for efforts to assess the Green house Gas Emissions (GHG) of anthropogenic origin and removal by sinks. India's per capita emissions are still considered low at 1.9 tonnes (2013), but its total emissions are next only to China and the US and is likely to overtake those of the EUby2019.

(Contd..5)

While comparing the Indian cities for their emission scores, Delhi is on top as the biggest emitter at over 38 million tonnes of carbon dioxide equivalent over all emissions, followed by Greater Mumbai at 22.7 million tonnes and Chennai at 22.1milliontonnes, Kolkata at 14.8 million tonnes, Bangalore at19.8 million tonnes, Hyderabad at 13.7 million tonnes and Ahmedabad at 9million tonnes were the other cities whose emissions for the year were calculated sector wise.

As per the statistics of Transport Department (GNCTD), total number of vehicles in Delhi is more than the combined total vehicles in Mumbai, Chennai and Kolkata. Delhi has 85 private cars per 1000 population against the national average of 8 cars per 1000 population. In terms of CO2 emissions due to motorvehicles, Delhi emits about12.4 million tonnes while the city of Bengaluru emits about 8.6 million tonnes.[1]

Therefore, addressing the quantum of emissions from the "Transport" and "Domestic" sector emerges to be the high priority subjects under the overarching umbrella of *"Climate change mitigation"* as committed to the UNFCC.

Encouraging "Electric Vehicles" as a viable option for phased transportation in terms of short and long distance trips with appropriate "Charging Infrastructure" is therefore, the pre-condition for this paradigm shift / phased migration to sustainable transportation.

For this changes are required in Infrastructure provisions (at Regional and City levels) and in Development Control Regulations (in terms of provisions therein) to include the formulations of norms and standards for *"Charging Infrastructure"* in the said Master Plan Regulations and State Bye-Laws for adoption across the country suiting local conditions.

2. EV Charging Technology

Electric Vehicle Supply Equipment (EVSE):

An EVSE is a wall mounted box that supplies electric energy for recharging of electric vehicle batteries. Also EVSEs have a safety lock-out feature that does not allow current to flow from the device until the plug is physically inserted into the car.

EVSEs can be customized with added features like:

- Authentication
- Integrated payment gateways
- Software for remote monitoring.

As electric vehicle charging technology continues to advance, several standards and guidelines have become widely accepted across the industry. This section gives a brief over view of charging infrastructure technology, standards, and terminology.

(P.T.O.)

Different types of EVSE:

Charging speeds- Charging power, which determines the time required to charge a vehicle, can vary by orders of magnitude across charge points, as shown in Table1. As mall household outlet may charge as slowly as 1.2 kW, while the most advanced rapid charging stations can charge at up to 350 kW. Charging infrastructure is broadly broken into three categories based on speed: Level 1, Level 2, and direct current (DC) fastcharging (sometimes referred to as Level 3).

(Source: "Emerging Best Practices for Electric Vehicle Charging Infrastructure",Oct'2017)

Private Charging: Charging batteries of privately owned cars through domestic charging points. Billing is mostly part of home/domestic metering.

AC "Slow" Charging: The home private chargers are generally used with 230V/15A single phase plug which can deliver a maximum of up to about 2.5KW of power. The EVSE supplies AC current to the vehicle's onboard charger which in turn converts the AC power to DC allowing the battery to be charged.

Public Charging: For charging outside the home premises, electric power needs to be billed and payment needs to be collected. The power drawn by these chargers may need to be managed from time to time.

DC "Fast" Charging: DC current is sent to the electric car's battery directly via the charge port. FC chargers (usually 50 KW or more) can supply 100 or more kilometers of range per hour of charging. The fast chargers would generally be used as a top-up, rather than fully charging vehicles. These are important for cab companies and corporate users who have a fleet of electric cars.

3. Options for EV Charging

There is an urgent need to offer flexible charging infrastructure for different vehicle segments to drive adoption of EVs. Charging infrastructure is the most crucial enabler in the entire EV value chain. The exploration of different charging models according to the local conditions shall enable faster deployment of electric vehicles in the country.

EV share in all vehicles - It has been broadly projected that by the current rate of adoption of EVs, about 15% of all vehicles in the country would be EVs by the year 2020.Therefore, while assuming percentage composition of all proposed capacities in Public facilities of vehicle holding capacity, the Metropolitan and "Tier I" cities will be assumed to have a higher percentage share of EVs, say ***20% for now***. The charging infrastructure prescriptions in all urban development guidelines shall, therefore, be in consonance with the said percentage.

(Contd..7)

Power Load sanction to premises – While adding these Charging Infrastructures to the proposed set of building types of the Indian cities, ***enhanced Power Load*** *shall have to be had for each such building type by the Power DISCOMs*, commensurate to the total additional power requirement of simultaneous operation of all the prescribed charging points in the premise. With further advancement of charging technologies and the enhanced capacity of chargers to draw more power, it is advised that the *load capacity assigned to each premise should be kept with a safety factor of 1.25*with along-term vision of 30 years.

Table1:EVs charging "modes" and 'availability'

Vehicle type	Slow Charging	Fast Charging	Public CI
2Wheelers	Y	N	Yes/Limited
3Wheelers	Y	N	Yes/Limited
PVs(Cars)	Y	Y	Yes
PVs(Buses)	N	Y	Yes

Table2: Charging options for EV types (by ownership)

Vehicle type	Private CI	Public CS	Predominant place of charging
2Wheelers	SC/BS	SC	Point of residence/ Work
3Wheelers	SC/BS	SC/BS	Residence / Parking stations
PVs(Cars)	SC/BS	FC	Residence /Point of work/ other public places
PVs(Buses)	-	FC/BS	Bus Terminals/Depots

Note*:*

- *The option of Battery Swapping (BS) for privately owned 2Ws and PV (Cars)is limited to Private CI.*
- *For3Ws the BS is proposed to be made available in PCS, for faster recharge experience only*
- *For PV (Buses), Captive Fast charging infrastructure for 100% internal use for fleets may be adopted by privately owned Depots/Garages.*

Based on the above stated EV charging technologies available and the current trend of evolving technologies of faster charging experience, the Ministry of Power has issued ***Guidelines and Standards for setting up Charging Infrastructure for Electric Vehicles***[*Ministry of Power (MoP) Guidelines dated 14.12.2018]* for charging infrastructure to be installed at every Public Charging Station (PCS). "Connectivity regulations and Safety norms" shall be defined by respective authorities such as Central Electric Authority/MoP for grid access to such PCS/any other charging station/infrastructure.

(P.T.O.)

4. **Charger Specifications and PCS Infrastructure**

Any installed PCS shall have one or more electric kiosk/boards with installation of all charger models as prescribed in the ***Guidelines and Standards*** *notified by* ***Ministry of Power, dated 14 December 2018*** *for* ***"Charging Infrastructure for EVs"*** (at *Annexure II*),with other necessary arrangements as deemed necessary.

Public Charging Station service providers shall be free to create charging hubs and to install additional number of kiosk/chargers in addition to the minimum chargers prescribed vide the MoP Guidelines, including options for installation of additional chargers, if required.

Note*:*

1. *Minimum infrastructure requirements do not apply to Private Charging Points meant for self-use of individual EV owners (non-commercial basis).*
2. *Captive charging infrastructure for 100% internal use for a company's own fleet will not be required to install all type of chargers and to have NSP tie ups.*
3. **Location of PCS / FCBCS in local area /building precincts**

In accordance with the Guidelines issued by the *Ministry of Power (MoP)*, following minimum standards with regard to density of/distance between PCS in local level facilities in building premise / urban precincts shall be followed as per provisions in the Model BBL-2016

1. At the Local levels (within the urban area):

- At least 1Public Charging Station is to be available within a grid of 3Km x 3Km.

2. At the Building premise levels (for various building types)

- Private charging infrastructure (non-commercial use) for individuals.
- For all commercial modes of charging EVs, at least 1PCS, as perminimum specifications laid under MoP guidelines.
- Stand alone Battery Swapping Stations may be added with the PCs.

Y.SRILAKSHMI
SPECIAL CHIEF SECRETARYTO GOVERNMENT

SECTION OFFICER.